

What is claimed is:

1. A method for automatic handling of errors within a database engine, the method comprising the steps of:

detecting an error while executing a query access plan; and

5 in response to detecting the error, automatically rebuilding the query access plan to generate a new query access plan.

2. The method of claim 1, further comprising the step of:

executing the new query access plan.

3. The method of claim 1, wherein the error is a function check.

4. The method of claim 1 further comprising the steps of:

15 receiving another error while executing a function within the new query access plan;

identifying a first implementation method of the function within the new query access plan; and

20 rebuilding the new query access plan by replacing the first implementation method with a second implementation method of the function so as to generate a rebuilt query access plan.

5. The method according to claim 1, further comprising the step of:

logging information about the error, and the new query access plan.

6. The method according to claim 1, further comprising the step of:

5 reporting the error.

7. A method for automatic handling of errors within a database engine, the method comprising the steps of:

receiving an error while executing a function within a query access plan;

identifying a first implementation method of the function within the query access

5 plan; and

rebuilding the query access plan by replacing the first implementation method

with a second implementation method of the function so as to generate a new query access plan.

10 8. The method of claim 7, wherein the function is one of a join function, an indexing function, a grouping function, and an ordering function.

9. The method of claim 7, further comprising the steps of:

executing the new query access plan.

15 10. The method of claim 9, further comprising the steps of:

receiving another error while executing the function within the new query access

plan; and

rebuilding the new query access plan by replacing the second implementation

20 method with a third implementation method of the function.

11. The method according to claim 10 further comprising the step of:

logging information about the error, the another error, and the new query access plan.

12. A method for automatic handling of errors within a database engine, the method comprising the steps of:

executing a query access plan comprising a plurality of functions, each function including a first implementation method;

5 detecting a first error when executing a first function;

rebuilding the query access plan to generate a new query access plan;

executing the new query access plan;

receiving a second error while executing the first function within the new query access plan; and

10 rebuilding the new query access plan by replacing the first implementation method with a second implementation method of the function.

13. A program product, comprising:

a program code configured upon execution to:

detect an error while executing a query access plan, and

in response to detecting the error, automatically rebuild the query access

5 plan to generate a new query access plan; and

a signal bearing medium bearing the program code.

14. The program product of claim 13, wherein the program code is further configured to:

receive an error while executing a function within the new query access plan;

10 identify a first implementation method of the function within the new query
access plan; and

rebuild the new query access plan by replacing the first implementation method
with a second implementation method of the function so as to generate a rebuilt query
access plan.

15

20

15. A program product, comprising:

program code configured upon execution thereof to:

receive an error while executing a function within a query access plan;

identify a first implementation method of the function within the query

5 access plan, and

rebuild the query access plan by replacing the first implementation method
with a second implementation method of the function so as to generate a new query
access plan; and

a signal bearing medium bearing the program code.

10

16. An apparatus comprising:

at least one processor;

a memory coupled with the at least one processor; and

a program code residing in memory and executed by the at least one processor, the

5 program code configured to:

detect an error while executing a query access plan; and

in response to detecting the error, automatically rebuild the query access
plan to generate a new query access plan.

10 17. The apparatus of claim 16, wherein the program code is further configured to:

execute the new query access plan.

18. The apparatus of claim 16, wherein the error is a function check.

15 19. The method of claim 16, wherein the program code is further configured to:

detect another error while executing a function within the new query access plan;

identify a first implementation method of the function within the new query
access plan; and

rebuild the new query access plan by replacing the first implementation method
20 with a second implementation method of the function so as to generate a rebuilt query
access plan.

20. The method according to claim 16, wherein the program code is further configured to:

log information about the error, and the new query access plan.

5

21. The method according to claim 16, wherein the program code is further configured to:

report the error.